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ABSTRACT

The primary purpose of this study was to describe the linguistic behavior exhibited by a female subject (age 2 years, 4 months) during naturally occurring social interaction with children of different ages. Verbal and nonverbal behavior were studied; of additional interest were variables influencing the emergence of linguistic behavior. Data were gathered through a case-study approach involving participant observation. Interactions observed were limited to those occurring with members of the subject's social network. Videotape equipment was employed to record interactions in a variety of settings. The data analysis, using elements of the ethnographic research cycle described by Spradley (1980), generated results in the form of hypotheses. These hypotheses suggested that the subject displayed communicative competence characterized by a wide range of verbal and nonverbal behaviors and situationally specific adaptations to the immediate context of the social interaction. Nonverbal components were found to variously substitute for, complement, and support verbal behaviors. It additionally appeared that proximity to older children resulted in maximal amounts of communicative behavior. (Author/RH)

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Verbal and Nonverbal Components of a Two Year Old's Social Interaction with Multiaged Partners

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ABSTRACT

The research examined communicative behavior, both verbal and nonverbal, of a two-year-old subject during social interaction with multiaged partners. Naturalistic inquiry, specifically ethnographaic analyses employing participant observation, were used. The generated hypotheses suggested that the two-year-old subject displayed communicative competence characterized by a wide range of verbal and nonverbal behaviors and situationally specific adaptations to the immediate context of the social interaction. Nonverbal components were found to variously substitute for, complement, and support verbal behaviors. It appeared, additionally, that proximity with older partners resulted in maximal amounts of communicative behavior.

INTRODUCTION

The purpose of the study was to begin to characterize the lingustic behavior that a two-year-old subject exhibited during social interaction in naturally occurring partnerships with children of varying ages. Furthermore, the attempt was to explore such early social communication on a number of dimensions: verbal symbolic behavior as well as nonverbal behavioral elements. Also, the study would begin to suggest variables that influence the emergence of such behaviors. The intent of such a study was to lay a foundation for study of two-year-old social-communicative behavior. To that end, a variety of settings and a range of partners of different ages were included. Additionally, a minimum of constraints and manipulations were imposed and a broad range of both verbal and nonverbal data recorded and analyzed. Given the brevity of research in the area for this age child, the decision was made to examine the social-communicative behaviors of one two-year-old subject in depth. The hypotheses that would be generated by such exploratory research would be utilized to suggest tentative directions for future research.

RELATED RESEARCH

The present research emerges from the theoretical position that young children possess both social will and at least some degree of social skill that is exhibited in their interactions with other children. Current theorists suggest that much of all human competence in the realm of social relations is directly related to the ability to communicate (DeStefano, 1978). As Ross and others (1982) state, "communication is the foundation of social interaction" (p. 73). Examination of social interaction, therefore, is intrinsically tied to consideration of the communicative behaviors of the interactors. Additionally, research suggests that communication, especially that of young children, is dependent upon both verbal and nonverbal dimensions. Furthermore, the younger the child, the more reliance is placed on nonverbal language in both expressive and receptive communication (Moerk, 1977).

In order to fully tap the range of a two-year-old's social skill, communicative behaviors exhibited during social interaction with other children, both verbal and nonverbal channels, singly and in combination, must be considered. Both verbal and nonverbal dimensions of language are seen to be critical in early social interaction, from infancy through the preschool years (Halliday, 1975; Moerk, 1977; Ross, et al., 1982).

Recent research dealing with various dimensions of early child-child interaction suggests that the young child is the possessor of emerging social-communicative skills. The following paragraphs briefly explicate those skills and the variables that have been found to influence their emergence.

Researchers have documented a progression of social-communicative behaviors that the child under two years of age exhibits. These researchers suggest that both the frequency and complexity of young children's social competence with their peers increases with age from about nine months onward (Eckerman, et al., 1975; Mueller & Brenner, 1977; Mueller & Lucas, 1975; Mueller & Vandell, 1979). This social competence is predicated, to a large extent, upon such nonverbal communicative behaviors as pointing, touching, reaching, and visual gazing supporting Denzin's (1977) notion of the early years as a conversation of gestures.

During the preschool years (three to five), speech acts and routines serve to initiate, maintain, direct and reestablish social interaction (Garvey & Hogan, 1973; Keenan, 1977). Research also suggests that children between these ages begin to adapt their communication to characteristics of their listeners. This has been demonstrated by children between the ages of three and five in speech to babies (Sachs & Devin, 1975; Shatz & Gelman, 1973) and in communication with adult listeners with varying characteristics (Maratsos, 1973; Menig-Peterson, 1975).

The body of research literature regarding peer-peer social development of children under two years of age has identified a number of facilitative variables. These include: quantity of previous peer experience (Mueller & Vandell, 1979), familiarity with the specific partner (Garvey & Hogan, 1973), dyadic partnerships (Mueller & Vandell, 1979), partnerships with somewhat older peers (Goldman & Ross, 1978; Lewis & Rosenblum, 1975), partnerships with older siblings (Dunn & Kendrick, 1979), and interaction occurring in the subject's own home (Mueller & Vandell, 1979). Additionally, research suggests that partnerships which are same-aged (within six months of each other) or mixed-aged (six months to one-and-a-half years apart in age) produce different behaviors and may serve different functions in children's social-communicative development (Langlois, et al., 1978; Lewis & Rosenblum, 1975; Lougee, et al., 1977).

METHODOLOGY

The research discussed in the previous paragraphs has considered the behaviors of both one-year-olds and of children three years or older with their peers. The knowledge base regarding the communicative skills of two-year-olds in an interactive context is extremely limited, however. For this reason, this study employed the methodology of naturalistic inquiry. This allowed the discovery of both questions and answers from within the social situation being studied rather than the imposition of preset research hypotheses that would have little basis in previously garnered data (Guba, 1978; Spradley, 1980). Such an exploratory study would generate hypotheses rather than predict or control behavior on the basis of existing hypotheses (Duncan & Fiske, 1977).

The ethnographic technique of participant observation was selected as the means most suited to the discovery of emergent patterns in the child's communicative behavior in order to form the basis for the development of hypotheses. A case study approach was employed to enable depth of study into two-year-old social-communicative behavior in a variety of settings and with a variety of partners. Further research will be needed to provide breadth of study and to confirm or refute the hypotheses generated by this study.

The subject of the study was a two-year four-month-old female. The subject was the second-born child of a two-child, white, middle class family. The subject was selected because of her accessibility, enabling taping which could occur spontaneously rather than having to be pre-arranged and researcher-controlled. Additionally, the subject's and her partners' previous familiarity with the researcher diminished the effects of the videotaping process itself.

The interactions observed were limited to those which occurred with a number of partners who were already members of the subject's social network. Six children (five months, two-years two-months, two-years five-months, four-years three-months, four-years five-months, and eleven-years five-months in age) were observed in various combinations of partnerships with the subject over the course of approximately a month (See Figure 1). Videotape equipment was employed to record the interactions. These interactions were taped as they occurred, without researcher control or manipulation of their occurrence, their situational characteristics, or their duration. Portable videotape equipment was used in order to allow the researcher maximum mobility in following the children's interactions. As shown in Figure 1, a variety of settings were videotaped, including both the subject's and the partners' homes and indoor, outdoor, mealtime and bathtime locations.

The collected videotapes were transcribed and analyzed using elements of the ethnograpic research cycle described by Spradley (1980). Domain analysis was employed to ferret out the patterns found within the videotaped records of the subject's behaviors. Four domains were discovered: verbal behaviors, nonverbal behaviors, overlapping verbal/nonverbal behaviors, and contextual communications (see Figures 2, 3, and 4). The categories that emerged from the domain analyses were further analyzed, by means of taxonomies, in order to determine more specific relationships between the elements of the domains. Using the data produced by the domain and taxonomic analyses, the behavioral elements found were recorded and tallied for each situation. The quantity of social interacrtion and the range of both verbal and nonverbal behaviors exhibited during such social interaction were examined. (For further details regarding the implementation of the methodology, the reader is referred to Price, 1983.)

DISCUSSION OF RESULTS

The data analyses generated research results in the form of hypotheses. The following paragraphs will discuss the content of those hypotheses and their congruence with previous research.

	Partner(s)' name and age in years and months	Location	Activity
1.	Ben (4-3)	Ben's living room, dining room, entry room, bedroom	play
2.	Ben (4-3)	Ben's dining room	meal
3.	Ben (4-3) molly (4-5)	Ben's backyard	play
4.	Courtney (2-2)	Emily's living room, dining room	play
5.	Courtney (2-2)	Emily's backyard	play
6.	Courtney (2-2)	Emily's backyard	play
7.	Ben (4-3) Molly (4-5) Mark (11-5)	Emily's backyard	play
8.	Mark (11-5)	Mark's yard	play
9.	Molly (4-5)	Molly's room	play
10.	Molly (4-5)	Emily's kitchen, front porch	meal
11.	Ben (4-3) Molly (4-5)	Ben's dining room	meal
12.	Jon (0-5)	Jon's living room	play
13.	Ben (4-3) Molly (4-5) Jon (0-5)	Ben and Jon's living room, dining room, entry room	play
14.	Molly (4-5)	Emily and Molly's upstairs bathroom	bath
15.	Ben (4-3) Molly (4-5)	Ben's living room, dining room, entry room, kitchen	play
16.	Molly (4-5)	Ben's backyard	play
17.	Cate (2-5)	Cate's living-dining room, stairs to second floor, sister's room	play
18.	Cate (2-5)	Cate's backyard	play

Figure 1. Videotaped situations (listed in the order in which they were taped).

I. Verbal Behavior	A. Request	1.	information seeking question
		2.	directive action request
		3.	suggestive action request
		4.	protest action request
		5.	permission request
	B. Response	1.	answer
		2.	agreement
		3.	disagreement
		4.	compliance
		5.	compliance refusal
		6.	qualification
		7.	apology
	C. Description or Statement	1.	identification
		2.	possession
		3.	event
		4.	property
		5.	location
		6.	evaluation
		7.	internal report or intention
		8.	attribution
		9.	rule or procedure
	D. Conversational Device	1.	call
		2.	accompaniment
		3.	rhetorical request
	E. Nonliteral Verbalization	1.	pretend
		2.	joke
		3.	game
	F. Nonword Verbalization	1.	standardized nonword
		2.	sound play
		3.	nonword song
		4.	nonword
	G. Count or Song	1.	count
		2.	song
	H. Incomplete or Uninterpretable	1.	incomplete verbalization, finished
		2.	incomplete verbalization, unfinished
		3.	uninterpretable
		4.	unclear

Figure 1. Taxonomic chart of the verbal behaviors exhibited by the subject during social interaction initiation and maintenance.

I. Nonverbal Behavior	A. Kinesic Behavior	1. Hand and arm gestures	a. pantomimic gestures
			b. deictic gestures
			c. hold to indicate
		2. Facial expressions	a. visual gaze to partner
			b. smile
			c. visual gesture to object
		3. Body Motion	a. body oriented to partner's
			b. movement towards partner
			c. movement with partner
	B. Touching Behavior (Tactilism)	1. Touch partner	a. with body part
			b. with object in hand
		2. Touch object (simultaneous with partner's touching same objects	
	C. Paralinguistic Behavior	1. Nonlanguage sounds	a. laugh
			b. cry
		2. Pitch	a. statement
			b. question
		3. Stress	a. action protest
			b. call
		4. Intonation Patterns	a. addressing near-age-mate or older partner
			b. addressing infant
			c. addressing partner as pretend infant
	D. Proxemic Behavior	1. Distance between subject and partner	

Figure 2. Taxonomic chart of the nonverbal behaviors exhibited by the subject during social interaction initiation and maintenance.

I. Overlapping Verbal and Nonverbal Behaviors	A. Response to Partner's Question	1. Answers question	a. verbal answer
			b. verbalization that indirectly answers question
			c. nonverbal answer
			d. both verbal and nonverbal answer
		2. Does not answer question	
		3. Starts to answer question but verbalization is incomplete	
	B. Response to Partner's Request or Directive	1. Compliance	a. verbal compliance accompanied by nonverbal compliance
			b. nonverbal compliance without verbal
		2. Noncompliance	a. verbal noncompliance accompanied by nonverbal noncompliance
			b. nonverbal compliance without verbal
	C. Repetition of Partner	1. Verbal repetition	
		2. Nonverbal repetition	
		3. Both verbal and nonverbal repetitions	
	D. Repetition of Self	1. Verbal repetition (usually with nonverbal behavior repetition)	
		2. Changed verbal repetition (usually with nonverbal behavior repetition)	
	E. Social Interaction Initiation or Reinstatement	1. Verbalization to partner	
		2. Verbalization plus visual gaze to partner	
		3. Verbalization plus movement toward partner	
		4. Verbalization plus visual gaze and movement toward partner	
		5. Nonverbal behavior only	

Figure 3. Taxonomic chart of the overlapping verbal and nonverbal behaviors exhibited by the subject during social interaction initiation and maintenance.

Social-Communicative Competence

The two-year-old subject of this research presented a picture of a child interested in communicating and acting in concert with other children. Unlike the child under two (Becker, 1977; Dunn & Kendrick, 1979; Mueller & Vandell, 1979), the two-year-old subject displayed social-communicative capabilities that appeared to be undiminished by changes in setting and activity. Proxemic time was utilized by the subject to make verbal requests of her partner, to respond to her partner's statements and demands, and to inform her partner with specific descriptions and statements. Specifically, the two-year-old's verbal communicative behavior included a wide range of elements exemplified by various forms of requests, responses, descriptions, conversational devices, nonliteral verbalizations, nonword verbalizations, and songs. Of these, information seeking questions, nonwords, directive action requests, and event descriptions were the most frequent. Since no patterns were discernible in relation to partner or setting characteristics, it was hypothesized that the subject employed a wide range of situationally specific behaviors that were adaptations and responses to the immediate context of the social situation.

The two-year-old subject also displayed a wide range of nonverbal communicative behaviors including elements of kinesic, tactile, paralinguistic and proxemic behaviors. Gestures, body movements, paralinguistic qualities such as pitch, stress and intonation and the use of distance were employed by the subject in meaningful ways in concert with verbalizations. These behaviors variously substituted for, complemented, or supported the verbal behaviors, as Moerk (1975) suggests will occur in the young child's communicative behavior. The body motion and the pitch, stress, and intonation patterns employed by the subject suggest the importance of these channels in the initiation and maintenance of social interaction with all partners and in all settings. Laughter and crying were also exhibited across situations and served a metacommunicative function, as Goldman and Ross (1978) suggest, and aided in regulating interaction. Both verbal and nonverbal elements were employed, singly and in combination, in the context of responses to partners' questions, requests, and directives, repetitions of partner and self, and social interaction initiation and reinstatement. Furthermore, the subject's use of nonverbal behaviors was particularly apparent in instances where the verbal behaviors most expected a response (in terms of traditional social expectations and conversational rules). For example, visual gaze and body orientation were employed by the subject in conjunction with requests and calls. Additionally, the subject maintained awareness of her partner(s) that enabled entry into, exit from, and reestablishment of interaction. Contextual adaptations to the partner and the situation also occurred during proxemic time and were exemplified both verbally and nonverbally.

These findings regarding the general social-communicative competence of the two-year-old subject are, in a rudimentary sense, congruent with the picture drawn of the child under two who demonstrates social-communicative skills in continually expanding stages and competencies (Eckerman et al., 1975; Mueller & Brenner, 1977; Mueller & Lucas, 1975; Mueller & Vandell, 1979). The breadth and depth of these characteristics suggested by the hypotheses of this study, however, have not been previously elucidated.

Sibling Interaction

In the present research, proximity of the two-year-old subject with her older sibling appeared to result in communication and interaction that was neither as frequent or complex as that afforded by proximity with other familiar children of various ages. This is in contradiction to research conducted by Dunn and Kendrick (1979; 1981), Lamb (1978a; 1978b) and Pepler and others (1982) who suggest that interaction with an older sibling maximizes the communicative and social behaviors of children twelve months, fourteen months, eighteen months, and three years. behavior between siblings of unequal ages and non-siblings of equal ages. The patterns of behaviors between siblings may be expected to be unique to each sibling pair, to a great extent, and conclusions must not be based solely on comparisons with peer dyads. Given the tentative findings of the present research and the possible variation in patterns of relating between sibling pairs, older siblings should not necessarily be expected to afford maximal opportunity for the development of social-communicative competencies in the two-year-old younger sibling.

Differential Behaviors in Relation to the Age(s) of Partners

The present research suggested that older partners maximize the social-communicative interactions of the two-year-old subject. In single partner situations the number of message units verbalized by the two-year-old subject increased as the age of the partner increased, except in the case of the older sibling as partner.

The hypotheses of the present research also suggested that certain communicative behaviors varied according to the age of the partner. For example, the two-year-old subject exhibited more partner repetition, less self-repetition, and less social interaction initiation and reinstatement with older partners. Also, the number of gestures and compliances exhibited by the subject increased as the age of the partner increased. The hypotheses of this research suggested that the two types of social-communicative experience (same- and mixed-aged partnerships) may serve different functions in children's development. Such a result is congruent with the findings of Langlois and others (1978) and Lougee and others (1977).

The present research also disclosed communicative behaviors that are unique to the interactions with the infant and another partner as a pretend baby. Exaggerated intonation, high pitch, close proximity, short message unit length, and a greater number of calls, touching behavors, and self-repetitions uniquely characterized the two-year-old subject's communicative behavior with the five-month-old infant and the role-played baby. Gestures and contextual communications were also exhibited less frequently by the subject during interaction with the infant partner. Such verbal and nonverbal behaviors can be described as adaptations which occurred in accordance with the perceived abilities of the listener. The adaptation of verbal and nonverbal language exhibited by the two-year-old subject of the present research is similar, then, to that demonstrated in other studies by significantly older children (Sachs & Devin, 1975; Shatz & Gelman, 1973).

Differential Behaviors in Relation to the Number of Partners

In the present research, differential social-communicative interaction behaviors were evidenced by the two-year-old subject relative to the number of partners in the situation. When the subject was in proximity with just one partner, there was more social interaction, the episodes were longer, and the subject exhibited a greater number of verbal behaviors. Additionally, the subject's verbal and nonverbal social interaction initiation and maintenance strategies were more successful in dyads than they were in multiple partner situations. Vandell (1977) and Bronson (1975) reported similar results for children under two.

EDUCATIONAL IMPORTANCE

If future research validates the hypotheses generated by this study, the preceding conclusions have implications that would effect areas of educational enterprise. Because these hypotheses have not yet been subjected to in-depth testing, however, practice recommendations are speculative in nature and include suggestions for potentially fruitful directions.

The importance of studying early communicative behavior in the context of child-child social interactions can be seen as critical on three dimensions: the fostering of communicative and social competence, the increase of parental knowledge base, and the informing of early childhood programming rationale. First, the portrayal of competence in the sphere of social relations as directly tied to communicative ability suggests the need to explore means for facilitating such communictive development and ability. Secondly, the growing societal belief that informed parents make better parents suggests that an increase in the breadth and depth of the knowledge base available to parents can lead indirectly to better developed, in this case more communicatively and socially competent children. Thirdly, the recent and continuing increase in programs serving children of preschool age, leads to the growing importance of informing educational practice with solid research if such programs are to have positive effects on young children's development. In all three of these dimensions, increased knowledge in the area of language development in social settings can lead to facilitation of both that development and its related abilities.

The hypotheses of this study suggest that in all three of these dimensions the following information needs to be considered. 1) It is potentially desirable to encourage involvement of two-year-olds in a social network that is as broad and varied as possible. In that network, a sibling would be seen as only one of a multitiude of partnership opportunities. 2) Mixed-age social experiences (e.g., younger, older, and peer partnerships) may be essential to maximal advancement of social-communicative abilities. The customary age segregation found in both parent-designed play partnerships and early childhood programs may be deleterious to maximal development. 3) The two-year-old's developing social-communicative skills seem to be better suited for interaction with one partner at a time. 4) It might be productive for early childhood educators and parents of two-year-olds to develop skill in observing and interpreting the social behaviors of their children. In helping adults understand the interactions they witness, and to identify the factors that hinder or enrich those interactions, it is possible that the development of social-communicative competence might be facilitated.

Additionally, the importance of this study is reflected in its methodological characteristics. Hypotheses have emerged that begin to shed light on areas of child development that have been under-explored in educational research. Such ground breaking was enabled by a methodology that did not constrain, in a priori fashion, what could be found. Furthermore, a methodology that was child-centered allowed a wider range of behaviors to emerge when compared to those communicative behaviors and competencies that have been found to be characteristic of young children's abilities in experimenter-contrived situations. More such naturalistic research is necessary in order to explore the elements of two-year-old social-communicative behavior.

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